

**Nevada Division of Environmental Protection
Chemical Accident Prevention Program
Element Audit Checklist**



Facility:				Date:	
INITIAL FACILITY PROGRAM REVIEW					
PROCEDURE/POLICY & RECORDS AUDIT					
I) FACILITY & SUBSTANCE INFORMATION					
a. Covered Processes, Substances and Quantities (List on the Following Table)					
Process Description	Substance/Chemical Name	CAS #	Registered Qty (lbs)	Max Possible On-Site Qty (lbs)	Actual On-Site Qty (lbs)
b. Important Facility Information					Resp. Code
1. Is facility requesting that a portion of its submitted CAPP documents be treated as TRADE SECRET?					
2. Who has been designated as the responsible party for the facility, and have CAPP documents that require certification been signed by this person? List name, job title, tel. & fax #'s, and e-mail address:					
3. Who has the facility designated as the primary CAPP contact? List name, job title, tel. & fax #'s, and e-mail address:					
4. Has facility designated an emergency contact? List name, job title, tel. & fax #'s, and e-mail address:					
5. Has facility designated what personnel (positions) are responsible for ensuring compliance with the various CAPP requirements (Management System)? Obtain organizational chart.					
6. What is the facility's mailing address? List:					
7. What is the facility's actual location? Identify location or address, if different from mailing address:					



Notes/Comments Pertaining to Responses to Questions for Element I:		
II) EXISTENCE, STRUCTURE AND FORMAT OF PROCESS SAFETY INFORMATION (PSI)	NAC Ref.	Resp. Code
1. Do MSDS or other substance hazard data for all covered substances appear to exist on-site?	459.95412(2a)	
2. Has a block flow or simplified Process Flow Diagram been developed?	459.95412(2b1)	
3. Does a Process Chemistry description exist for the current process?	459.95412(2b2)	
4. Is the maximum intended on-site inventory defined (physical capacity or Admin. Control)?	459.95412(2b3)	
5. Do Safe Limits (Upper & Lower) and Consequences of Deviating outside the Safe Limits, appear to have been defined for all pertinent process parameters (pressure, temperature, flow, composition limits, etc.)?	459.95412(2b4 & 2b5)	
6. Have Piping & Instrument Diagrams (P&IDs), covering the entire regulated process, including process auxiliary systems and utilities, been developed?	459.95412(2c2)	
7. Have the materials of construction been defined for all equipment, piping and instruments been defined?	459.95412(2c1)	
8. Have Electrically Hazardous Areas been defined?	459.95412(2c3)	
9. Have required relief pressures, rates and sizing basis been defined, and have the capacities of existing pressure relief devices been confirmed, for each necessary location?	459.95412(2c4)	
10. For regulated processes enclosed by a building, has the capacity of the mechanical Ventilation Systems been determined, and has the capacity been confirmed to be adequate?	459.95412(2c5)	
11. If the building Ventilation System includes a scrubber for toxic or highly toxic compressed gases, does it meet the requirements of the Uniform Fire Code, Article 80?	459.95412(2c5)	
12. Do Heat & Material Balances exist for the regulated process (not mandatory if the process was built before May 26, 1992)?	459.95412(2c7)	
13. Has a Safety System Description (SSD) been developed, and does it include all applicable systems such as: ESD System; Toxic or Combustible Gas Sensors; Flame Detectors; Firewater System; Emergency Generator; Uninterruptible Power Supply (UPS); Flare System; Incinerator or Vent Scrubber; audible or visual Alarms; building Ventilation System; etc.?	459.95412(2c8)	
14. Have all applicable codes and specifications been defined, and has compliance with the listed codes & standards been confirmed?	459.95412(2c6, 3 & 4)	



Notes/Comments Pertaining to Responses to Questions for Element II:		
III) EXISTENCE, STRUCTURE AND FORMAT OF PROCESS HAZARDS ANALYSIS (PHA)	NAC Ref.	Resp. Code
1. Was relevant Process Safety Information compiled and verified prior to conducting the PHA?	459.95412(1)	
2. Was the PHA methodology selected from the options provided in regulation, and was the chosen methodology approved by NDEP-CAPP staff prior to proceeding?	459.95414 (3 & 4)	
3. Was a list of previous accidents and near-misses, including those from other similar facilities, developed and considered by the team when conducting the PHA?	459.95414(5b)	
4. Were all portions of the regulated process included in the PHA?	459.95414(1)	
5. Were utilities or auxiliary processes, that could potentially cause an accidental release, fire or explosion in the area of regulated process, included in the PHA?	459.95414(5a)	
6. Do the Consequence of Hazard summaries reflect failure of Engineering & Administrative Controls, OR, if the Consequence of Hazard summaries don't reflect complete failure of Engineering/Administrative Controls, have those controls that were assumed to be functional been thoroughly evaluated to ensure they are adequately designed & maintained?	459.95414(5d)	
7. Were Consequence of Hazard summaries brought to true completion, and do they describe Safety & Health effects when those effects are possible?	459.95414(5g)	
8. Was the impact of functioning Engineering & Administrative Controls considered when defining the likelihood of the identified hazard resulting in the defined Consequence?	459.95414(5c)	
9. Was the impact of failed Engineering & Administrative Controls considered when defining the Severity of the Consequence for the identified Hazards?	459.95414(5d)	
10. Have Facility Siting issues been thoroughly addressed as part of the defined PHA method, or as a separate study (such as a siting checklist)?	459.95414(5e & 6b)	
11. Have Human Factors been thoroughly addressed as part of the defined PHA method, or as a separate study (such as a human factors checklist)?	459.95414(5f & 6a)	
12. Have External Forces been thoroughly addressed as part of the defined PHA method, or as a separate study, and did this analysis include consideration of external forces such as: Earthquake; High Winds; Lightning and Static Electricity; Fire or Explosion in Adjacent Equipment or Facilities; Loss of Utilities (including electricity, process and fire water, instrument air, steam and nitrogen); Release of a Hazardous Material in an adjacent piece of equipment or an adjacent facility; Vehicular or Rail Car Impact; Breakdown of Facility Security or inadequate facility security; etc.?	459.95414(6c)	



13. Has use of a safer alternative process or substitution with a less hazardous substance, been reviewed and considered for the current plant location?	459.95414(5a)	
14. Did the team conducting the PHA have a members with: 1. Expertise in engineering and process operations, 2. Knowledge specific to the process being evaluated, and 3. Knowledge in the specific PHA methodology being employed?	459.95414(7)	
15. Has a course of action been determined for each PHA recommendation and are the actions scheduled?	459.95414(8a – 8d)	
16. Have recommendations been communicated to all affected personnel?	459.95414 (8e)	
Notes/Comments Pertaining to Responses to Questions for Element III:		
IV) EXISTENCE, STRUCTURE AND FORMAT OF STANDARD OPERATING PROCEDURES (SOPs)	NAC Ref.	Resp. Code
1. Do written SOPs appear to exist for the entire covered process, and do they appear to provide clear and simple instructions in a language understood by all pertinent operating and maintenance personnel?	459.95416	
2. Do SOPs appear to include steps for all applicable operating phases, such as: Initial Start-Up (Commissioning); Normal Operations; Temporary Operations; Emergency Shut-Downs; Emergency Operations; Normal Shut-Down for a Turnaround, Start-Up following a Turnaround; Start-Up following an ESD or after a system is put in standby mode, etc.?	459.95416(2a)	
3. Do SOPs appear to the include Upper and Lower Operating Limits, Consequences of Deviations from the Safe Operating Limits, and Steps or Actions required to Correct or Avoid Deviations from Safe Operating Limits as defined in the PSI?	459.95416(2b)	
4. Has Safety & Health (S&H) information been included in the SOP manual, either as a specific section or as a section of each procedure?	459.95416(2c)	
5. Is Safety System Description, SSD, included as a specific SOP, or as an addendum, in the SOP manual, and does it include all systems defined in the PSI?	459.95416(2d)	
6. Do SOPs, whether hard copy or on-line, appear to be readily accessible by operations or maintenance personnel?	459.95416(3a)	



7. Are SOPs being reviewed as often as necessary to assure that they reflect current operating practice, and at a minimum does the facility certify on an annual basis that all SOPs in use are current & accurate?	459.95416(3b & 3c)	
8. Have all pertinent Safe Work Practices (e.g., Hot Work procedure; Lock-Out/Tag-Out procedure; Confined Space Entry procedure; Process Equipment Opening/Linebreaking procedure; Controlled Access into a facility by maintenance, contractor, laboratory or other support personnel procedure/policy; etc.) been developed and implemented?	459.95416(3d)	
Notes/Comments Pertaining to Responses to Questions for Element IV:		
V) EXISTENCE, STRUCTURE AND FORMAT OF TRAINING PROGRAM	NAC Ref.	Resp. Code
1. Does Training Program provide for instruction in a language understood by each operator?	459.95418	
2. Does the facility provide Initial Training for employees that operate a process?	459.95418(1&4)	
3. Does the specific Initial Training that is required include: <div style="display: flex; justify-content: space-between;"> <div> <ul style="list-style-type: none"> - an overview of the process - relevant SOPs developed pursuant to NAC 459.95416 - plant layout </div> <div> <ul style="list-style-type: none"> - location of equipment and instruments - process specific Safety & Health hazards - emergency operations, including ESD - relevant Safe Work Practices (SWPs)? </div> </div>	459.95418(1)	
4. Does the facility provide Refresher Training at least every 3 years, and more often if necessary, to each employee involved in operating a process, in order to ensure that the employee understands and adheres to the current SOPs?	459.95418(3)	
5. Does the facility management consult with operating personnel to determine the appropriate frequency of Refresher Training, and is this consultation documented?	459.95418(3)	
6. Is there a Training Syllabus for EACH position that operates this process, related to both Initial and Refresher Training?	459.95418(4)	
7. Does the facility ascertain whether each employee involved in operating a process has comprehended the Training, and is the Test/Evaluation content documented?	459.95418(5) 459.95418(6)	
8. Has a Passing/Failing criteria been established for each Test, and is performance of the employee in the defined operational position dependent upon achieving a passing score?	459.95418(5)	
9. Is comprehension evaluated for both Initial and Refresher Training?	459.95418(5)	
10. Does the facility maintain a record of the Training required for each employee?	459.95418(6)	



Notes/Comments Pertaining to Responses to Questions for Element V:		
VI) EXISTENCE, STRUCTURE AND FORMAT OF MECHANICAL INTEGRITY (MI) PROGRAM	NAC Ref.	Resp. Code
1. Do written maintenance procedures appear to exist?	459.95421(1a)	
2. Does the MI Program require that maintenance personnel be given training on an overview of the process and applicable maintenance procedures?	459.95421(1b)	
3. Does the MI program require that inspections and tests be performed on all equipment identified on the Critical Equipment List, and that procedures for such work follows recognized and generally accepted good engineering practices?	459.95421(1c) 459.95421(1d)	
4. Does the MI Program require that inspections & tests of equipment be performed in the frequency required by good engineering practices and consistent with any applicable recommendations from the manufacturer of the equipment, or more frequently if determined by previous experience in operating the equipment?	459.95421(1e)	
5. Does the MI Program require that each inspection & test performed on equipment be documented?	459.95421(1f)	
6. Does the MI Program require that any deficiencies that are outside of acceptable limits found during the inspection or test be corrected before the equipment is returned to service?	459.95421(1g)	
7. Does MI Program require that equipment, as fabricated, be ensured as being suitable for the process, in terms of the installation of new equipment or construction of a new process (MOC)?	459.95421(1h)	
8. Does MI Program require that appropriate checks & inspections be performed to ensure that equipment is installed properly & consistent with design & manufacturer specifications?	459.95421(1i)	
9. Does the MI Program require that maintenance materials, spare parts and equipment are verified as suitable for the process for which they will be used (QA/QC process)?	459.95421(1j)	



Notes/Comments Pertaining to Responses to Questions for Element VI:		
VII) EXISTENCE, STRUCTURE AND FORMAT OF MANAGEMENT OF CHANGE (MOC) PROGRAM	NAC Ref.	Resp. Code
1. Does the MOC procedure define when it is to be used (Change in chemicals, technology, equipment, procedures OR change in buildings structures and equipment that affect a covered process. Organizational changes that impact the implementation of the prevention program or emergency response program)?	459.95423(1&2)	
2. Does the MOC procedure require that the technical basis for a proposed change be documented and reviewed?	459.95423(3a)	
3. Does the MOC procedure require documented review of the potential safety impacts caused by the proposed change?	459.95423(3b)	
4. Does the MOC procedure require documented review of the potential health impacts caused by the proposed change?	459.95423(3b)	
5. Does the MOC procedure require documented review of the Standard Operating Procedures for potential impacts caused by the proposed change?	459.95423(3c)	
6. Does the MOC procedure require documented review of the Safe Work Practices for potential impacts caused by the proposed change?	459.95423(3c)	
7. Does the MOC procedure require the designation of the time period necessary to make the proposed change?	459.95423(3d)	
8. Does the MOC procedure designate parties responsible to authorize the scope, performance and completion of each of the elements noted in 'i' through 'vii' above?	459.95423(3e)	
9. Does the MOC procedure provide a mechanism to require that all authorizations be secured prior to implementation of the proposed change?	459.95423(3)	
10. Does the MOC procedure require verification that process operators and any maintenance or contract employee whose job tasks will be affected by the change are informed of proposed change prior to implementation? (This applies in circumstances where formal training and comprehension evaluation are not necessary.)	459.95423(4)	
11. Does the MOC procedure require verification that process operators and any maintenance or contract employee whose job tasks will be affected by the change are trained in the proposed change prior to implementation? (This applies in circumstances where the duties of personnel are being changed, and verified comprehension of those changed duties are important.)	459.95423(4)	
12. Does the MOC procedure require that the Process Safety Information (PSI) be updated as necessary?	459.95423(5a)	
13. Does the MOC procedure require the S&H information, SOPs and SWPs be updated as necessary?	459.95423(5b)	



Notes/Comments Pertaining to Responses to Questions for Element VII:		
VIII) EXISTENCE, STRUCTURE AND FORMAT OF PRE-STARTUP SAFETY REVIEW (PSSR) PROGRAM	NAC Ref.	Resp. Code
1. Does the PSSR procedure require verification that installed equipment and materials are confirmed to be in accordance with design specifications prior to introducing a substance into the process?	459.95425(2a)	
2. Does the PSSR procedure require verification that installed instruments and controls are confirmed to be in accordance with design specifications prior to introducing substance into the process?	459.95425(2a)	
3. Does the PSSR procedure require verification that construction work is confirmed to be in accordance with design specifications prior to introducing a substance into the process?	459.95425(2a)	
4. Does the PSSR procedure require that procedures are verified to be in place for the following:	459.95425(2b)	
a. Standard Operating Procedures	459.95425(2b)	
b. Safe Work Practices	459.95425(2b)	
c. Maintenance Procedures	459.95425(2b)	
d. Emergency Response	459.95425(2b)	
5. Does the PSSR procedure require that a process hazard analysis be performed?	459.95425(2c)	
6. Does the PSSR procedure require that all PHA recommendations be resolved prior to startup?	459.95425(2c)	
7. Does the PSSR procedure require that an MOC be completed for all modifications of an existing process?	459.95425(2d)	
8. Does the PSSR procedure require that operating personnel are trained in the new process or change prior to their operating the process?	459.95425(2e)	
9. Does the PSSR procedure require that maintenance personnel are trained in the new process or change prior to their performing maintenance on the process?	459.95425(2e)	
10. Does the PSSR procedure require verification that all program requirements are satisfied prior to starting the new process or implementing the change?	459.95425(2)	



Notes/Comments Pertaining to Responses to Questions for Element VIII:

IX) EXISTENCE, STRUCTURE AND FORMAT OF VERIFICATION OF COMPLIANCE AUDITS	NAC Ref.	Resp. Code
<p>1. Does a well defined program appear to exist for conducting a Verification of Compliance Audit at least once every 3 years in order to evaluate whether adequate information, procedures & practices had been developed & implemented for:</p> <ul style="list-style-type: none"> - Process Safety Information (PSI) - Process Hazards Analysis (PHA) - Standard Operating Procedures (SOPs) & Safe Work Practices (SWPs) - Training Program - Mech. Integrity Program - Management of Change (MOC) Program - Pre-Startup Safety Review (PSSR) - Incident Investigation Program - Employee Participation Program - Contractor Program - Emergency Response Program? 	459.95427(1a)	
<p>2. Does the facility program require that the audit be conducted by at least one person knowledgeable in the process?</p>	459.95427(2)	
<p>3. Does the facility program require that the audit findings be documented in a report, and that the two most recent reports be retained on file?</p>	459.95427(1b) 459.95427(1e)	
<p>4. Does the facility program require that deficiencies discovered during the audit be promptly corrected and that all such corrections be documented?</p>	459.95427(1c) 459.95427(1d)	

Notes/Comments Pertaining to Responses to Questions for Element IX:



X) EXISTENCE, STRUCTURE AND FORMAT OF INCIDENT INVESTIGATION PROGRAM	NAC Ref.	Resp. Code
1. Is there a written procedure that defines when an incident investigation must be performed (When it resulted in OR could have resulted in a catastrophic release)?	459.95429(1)	
2. Is there a requirement to take some type of corrective action?	459.95429(1)	
3. Does the procedure require investigation initiation no later than 48 hours following the incident?	459.95429(2)	
4. Does the procedure require that the investigation team be composed of two people, including at least one person knowledgeable in process involved, and other persons with appropriate knowledge and experience to thoroughly investigate and analyze the incident?	459.95429(3)	
5. Does the procedure require that the investigation team include a contract employee if the incident involved his work?	459.95429(3)	
6. Does the procedure require that a report be produced, AND that each report be retained for a minimum of 5 years?	459.95429(4) 459.95429(8)	
7. Does the procedure include a system for tracking & documenting the recommendations and their implementation?	459.95429(5) 459.95429(6)	
8. Does the procedure include a system for reviewing each investigation report with all affected company & contract personnel whose job tasks are relative to incident findings?	459.95429(7)	
Notes/Comments Pertaining to Responses to Questions for Element X:		
XI) EXISTENCE, STRUCTURE AND FORMAT OF EMPLOYEE PARTICIPATION PROGRAM	NAC Ref.	Resp. Code
1. Does a written plan of action regarding the implementation of Employee Participation in CAPP aspects appear to exist?	459.95431(1)	
2. Does the written plan require that employees & their representatives be consulted regarding the development and implementation of the CAPP prevention program and emergency response program?	459.95431(2)	
3. Does the written plan require that employees & their representatives be allowed access to documentation developed pursuant to the CAPP program?	459.95431(3)	



Notes/Comments Pertaining to Responses to Questions for Element XI:		
XII) EXISTENCE, STRUCTURE AND FORMAT OF CONTRACTOR PROGRAM	NAC Ref.	Resp. Code
1. Does a Contractor Program, applying to contractors performing maintenance, turn-around, major renovation, or specialty work on or adjacent to a covered process, appear to exist?	459.95435(3)	
2. Does this program obligate the owner or operator to:	459.95435(1)	
a. When selecting a contractor, obtain and evaluate information regarding the safety performance and programs of the contractor?	459.95435(1a)	
b. Inform the contractor of known potential fire, explosion or toxic release hazards related to the work of the contractor and to the process on which he working?	459.95435(1b)	
c. Explain to the contractor the applicable provisions of the emergency response plan?	459.95435(1c)	
d. Develop and implement safe work practices consistent with NAC 459.95416?	459.95435(1d)	
e. Periodically evaluate the performance of the contractor in satisfying the requirements defined in question number 3 below?	459.95435(1e)	
3. Does this program obligate the contractor to:	459.95435(2)	
a. Ensure that each of his employees who will work on the process is trained in the work practices necessary to perform his job safely?	459.95435(2a)	
b. Ensure that each of his employees who will work on the process is instructed in: (1) The known potential fire, explosion or toxic release hazards related to his job and the process on which he is working; and (2) The applicable provisions of the emergency action plan?	459.95435(2b)	
c. Document that each of his employees who will work on the process has received and understood the training required pursuant to this subsection?	459.95435(2c)	
d. Prepare a training record for each employee that includes training dates and training comprehension record?	459.95435(2d)	
e. Ensure that each of his employees who works on the process follows the safety rules of the facility, including the safe work practices?	459.95435(2e)	
f. Advise the owner or operator of any unique hazards presented by or found during the work of an employee?	459.95435(2f)	



Notes/Comments Pertaining to Responses to Questions for Element XII:		
XIII) EXISTENCE, STRUCTURE AND FORMAT OF EMERGENCY ACTION PLAN / EMERGENCY RESPONSE PLAN (EAP/ERP)	NAC Ref.	Resp. Code
1. Has an Emergency Action Plan been prepared that addresses hazard recognition, emergency notification, and evacuation?	459.9544(2a)	
2. Are mechanisms in place to notify emergency responders?	459.9544(2b)	
3. If this facility provides hazardous materials response, is there an Emergency Response Plan that addresses on-site procedures for conducting a hazardous materials response operation?	459.95442(1a2)	
4. Has the facility reviewed the Emergency Action Plan and Emergency Response Plan with the local fire department and local HAZMAT responder?	459.95442(1b)	
Notes/Comments Pertaining to Responses to Questions for Element XIII:		
XIV)EXISTENCE, STRUCTURE AND FORMAT OF OFF-SITE CONSEQUENCE ANALYSES	NAC Ref.	Resp. Code
1. Has the facility evaluated offsite consequences for worst-case and alternate-case scenarios for each process?	459.95366 & 459.95368	
2. For worst-case scenarios:	459.95366	
a. Are the cases evaluated, substance quantities and release rates accurate?	459.95366	
b. If passive mitigation was claimed on the analysis, is that system in place and has it been verified to be functional under the worst-case release scenario?	459.95376	

c. Do the impact zone and defined receptors appear to be reasonable?	459.95366 459.9537 & 459.95372	
3. For alternate-case scenarios:	459.95368	
a. Are the cases evaluated, substance quantities and release rates reasonable?	459.95368	
b. If passive or active mitigation was claimed on the analysis, is that system in place and has it been verified to be functional under the release scenario?	459.95376	
c. Do the impact zone and defined receptors appear to be reasonable?	459.95368 459.9537 & 459.95372	
Notes/Comments Pertaining to Responses to Questions for Element XIV:		
General Procedure/Policy Review Notes/Comments:		